Amendments to the Specification and Abstract

Please replace paragraph beginning on page 7, line 23, with the following rewritten paragraph:

Fig. 2 shows a scanning microscope according to the invention, which is embodied as a confocal scanning microscope. The first light source 17, which is embodied as a pulse laser, generates the excitation light beam 19. The second light source 21, which is also a pulse laser, generates the emission light beam 23. The excitation light beam 19 and the emission light beam are combined by the dichroic beam combiner 25 and travel via the dichroic beam splitter 27 to the scanning module 29, which involves a cardan-suspended scanning mirror 31 that guides the excitation light beam 19 and the emission light beam 23 via the scanning optics 33, the optics 35 and, through the microscope optics 37, over or through the sample 39. The sample 39 is arranged on a microscope stage (not shown), which permits scanning in the z direction, in the direction of the excitation light beam 19. The various focal planes of the sample 39 are scanned successively by the excitation light beam 19 and the emission light beam 23. The excitation light beam 19 and the emission light beam 23 form the illumination-light beam path 41, which is represented as an unbroken line. The light 43 leaving the sample travels through the microscope optics 37 and, via the scanning module 29, to the beam splitter 27, passes through the latter and strikes the detector 45, which is embodied as a photomultiplier. The light 43 leaving the sample 39 is represented as a dashed line. Electrical detection signals proportional to the power of the light 43 leaving the object are generated in the detector 45 and are sent on to a processing unit (not shown). A bandpass filter 49, which stops out the light with the wavelength of the emission light beam 23, is arranged in front of the detector. The illumination pinhole 51, which is customarily provided in a confocal scanning microscope, and the detection pinhole 47 are schematically indicated for the sake of completeness. However, some of the optical elements for guiding and shaping the light beams are omitted for the sake of clarity. They are adequately known to a specialist working in this field. So that the focal regions of the excitation light beam 19 and the emission light beam 23 remain static relative to one another even while the scanning movement is executed, focussing optics 24 are provided between the first light source 17 and the dichroic beam combiner 25. Together with the different lengths of the optical paths from the first and second light sources 17 and 21 to the dichroic beam combiner 25, compensation is obtained for the axial chromatic aberration of all the other optics of the illumination-light beam path 41. To

compensate for lateral aberrations, adaptive optics 53, which are embodied as an LCD element, are arranged between the second light source 21 and the dichroic beam splitter. They are controlled as a function of the setting of the scanning mirror 31 in the beam-deflection device 29.